EASTERN RESEARCH GROUP, INC.

MEMORANDUM

TO: Bill Maxwell, U.S. Environmental Protection Agency, OAQPS (MD-13)

FROM: Mary Lalley, ERG/RTP

DATE: July 3, 1997

SUBJECT: Final Summary of June 19, 1997 Meeting of the ICCR Process Heater Work Group

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1.0 PURPOSE

The purpose of the meeting was to allow meeting attendees to discuss various activities of the ICCR Process Heater Work Group. Topics of discussion included database review, approaches for addressing various categories of process heaters, a presentation to the Coordinating Committee, computer issues, meeting facilitation, the role of the Coordinating Committee, and future meetings.

2.0 LOCATION AND DATE

The meeting was held on June 19, 1997 at the headquarters of the American Petroleum Institute (API) in Washington, D.C.

3.0 MEETING ATTENDEES

Meeting attendees include representatives of the OAQPS Emission Standards Division and trade associations. A complete list of attendees (with their affiliation) is included as attachment 1.

4.0 SUMMARY OF DISCUSSION

Meeting discussion generally followed the agenda provided as attachment 2. Discussions are summarized in the following sections:

4.1 Results of Inventory Database Review

John Ogle reported on progress made by the chemical manufacturing industry in reviewing the inventory database. Mr. Ogle summarized the general findings of the review:

- facility names are not available for many entries; for some, it is possible to determine the facility name, for others, it is difficult
- combustion device description are not available for approximately one-third to one-half of the entries
- there are a few boilers and incinerators in the process heater database
- there are many direct-fired process heaters in the database

Lee Gilmer reported on the progress of the petroleum refining industry in reviewing the inventory database. Mr. Gilmer reported that, while they have not completed sorting out units for their industry, they have concluded the following:

- there are many boilers in the process heater database

- there are many dryers in the process heater database
- there are approximately 6,000 process heaters and 250 facilities in the database for the petroleum refining industry (SIC 29)

John Ogle offered to sort the database for other industry group representatives and mail them the results of a query for their assigned source classification codes (SCC).

During the discussion of database review, it was suggested that indirect-fired units be separated from direct-fired units. John Ogle pointed out that this will be useful when the database is used to determine control devices in use. The Work Group agreed to determine whether units are direct- or indirect-fired during the database review. A field for indicating indirect or direct will be added to the database.

The Work Group agreed that, generally, ovens, kilns, dryers, and roasters will be considered to be direct-fired. Roy Carwile provided that "annealing", "homogenizing", and "normalizing" generally refer to indirect-fired process heaters in the aluminum industry. Mr. Carwile added that "furnace" is a generic term that cannot be used to determine if the unit is direct- or indirect-fired. Susan Fry indicated that a puffer would most likely be indirect-fired.

The Work Group discussed the schedule for completing review of the inventory database. Work Group members agreed to complete preliminary review of the inventory database by the July 24 meeting.

During discussion of database review, several question were asked regarding the level of certainty required for suggesting revisions. Bill Maxwell suggested that if an individual is unsure of a revision or whether a process heater is indirect- or direct-fired, he should ask the group’s opinion.

4.2 Overall Approach

Bill Maxwell presented a process flow diagram depicting a suggested approach for addressing process heaters. The Work Group suggested revisions to the diagram. The revised diagram is included as attachment 3. Roy Carwile suggested that a decision step should be added for gas-fired direct process heaters. The step would ask if the process being heated contributes to emissions. If not, the heater may be addressed in a manner similar to gas-fired indirect process heaters.

Several Work Group members agreed that representatives from additional industries, such as large appliance and glass manufacturing, will be needed when process heaters on the right side of the flow diagram (direct-fired) are addressed.

4.3 Direct-Fired Process Heaters Without Process Emissions

Bruno Ferraro pointed out that not all direct-fired process heaters have process-related emissions. Mr. Ferraro gave the example of baking ovens with emissions due solely to the combustion of fuel. Roy Carwile agreed that there are many direct-fired heaters with little or no emissions due to the process being heated. Mr. Carwile suggested that such process heaters could be addressed in the same manner as indirect-fired process heaters. Mr. Carwile added that such heaters may be difficult to identify. Bill Maxwell stated that the preliminary finding regarding gas-fired indirect process heaters may be expanded at a later date to include gas-fired direct heaters with no process-related emissions.

Roy Carwile cautioned against assuming that there are no process-related emissions for certain direct-fired process heaters. Mr. Carwile explained that setting emission limits based on fuel combustion alone may result in restricted operation if in fact the process does contribute to emissions. John Ogle

suggested that the Work Group continue to address indirect- and direct-fired units separately to maintain the logic that has been developed to support Work Group recommendations.

4.4 Non-Gas-Fired Process Heaters

Bill Maxwell expressed a concern that indirect process heaters fired by materials other than gas may not be well represented in the ICCR inventory database. Mr. Maxwell asked the Work Group for other sources of data on non-gas-fired indirect process heaters. Jim Seebold suggested comparing emission data for non-gas combustion, if available, to emission data for gas combustion. Mr. Seebold provided that EPRI reports are available for No. 6 fuel oil and pulverized coal. John Ogle asked if data will be provided through the ICCR Combustion Unit Survey. Mr. Maxwell replied that while some data on non-gas-fired units may be provided, it was difficult to identify owners of non-gas-fired process heaters when selecting survey recipients. Survey recipients were selected based on SCCs and SCCs for process heaters do not include an indication of whether non-fossil fuels are being burned. Roy Carwile stated that few waste-fired units are likely to be indirect-fired, with the possible exception of units that fire waste oil. Mr. Carwile added that process heaters that fire waste are most likely to be located at facilities that create an amount of waste sufficient enough to be used as a fuel. Mr. Carwile stated that the chemical, agricultural, and forest products industries are the industries most likely to burn materials other than gas. John Ogle pointed out process gases not similar to natural gas are also of interest.

Lee Gilmer suggested the following steps for identifying data needs for non-gas combustion:

- identify entries in the database with SCCs for non-gas combustion
- from the identified entries, separate indirect- and direct-fired units
- determine the non-gas indirect process heaters that are represented in the database
- determine the non-gas indirect process heaters that are not in the database
- develop a plan for obtaining data on the process heaters not in the database

Several Work Group members agreed that it is likely that units in the database for which it is indicated that multiple fuels are burned do not burn all of the fuels listed. The fuels have been included in operating permits to provided operational flexibility. Work Group members stressed that it is important to consider this when using information from the database.

4.5 Grain Elevators

Tom O'Connor provided information regarding the grain drying process. Mr. O'Connor explained that, at harvest, grain is approximately 20 percent water. Approximately 80 percent of grain harvested is brought to grain elevators. Grain brought to elevators is dried in a direct-fired dryer fueled by natural gas or propane. To Mr. O'Connor's knowledge, no grain dryer is designed to control HAP emissions. Mr. O'Connor addressed concerns regarding pesticides and herbicides on the grain that may be released into the atmosphere during drying. Mr. O'Connor explained that treatments applied in the field would not be on the dried material. Corn and soybeans grow in husks and pods, which are removed before drying. Wheat is not dried. Mr. O'Connor added that if pesticides are applied at grain elevators, they are applied after the grain is dried.

Mr. O'Connor stated that there is no logical reason to believe that grain dryers are major sources of HAPs. Mr. O'Connor asked the Work Group for guidance on the type of information required to show that grain elevators should not be a primary focus of the ICCR.

Jim Seebold suggested that HAP emission test data from a grain dryers may be helpful. Mr. O'Connor explained that grain dryers have not been tested for HAP emissions because there is no reason to believe that HAPs are emitted from them. Lee Gilmer speculated that representative of environmental groups would disagree with not focusing on grain dryers unless HAP test data are provided. John Ogle suggested that grain dryers would not have to be tested if it could be shown that there are no HAP control devices in place for grain dryers. Jim Seebold added that it will also be necessary to show that existing control devices do not effect HAP emissions.

Bruno Ferraro suggested that the industry build a case supporting the beliefs that only products of combustion are emitted from grain drying and that no HAP control devices are currently in use. Bill Maxwell suggested that the case then be reviewed by the Process Heater Work Group, presented to the Coordinating Committee and forwarded to the EPA.

Mr. O'Connor indicated that he is willing to provide additional information to the Work Group.

Bill Maxwell provided that the Combustion Turbine Work Group presented a similar issue the Coordinating Committee. The Combustion Turbine Work Group expressed a concern regarding the costs and benefits of testing emissions from units for which no HAP control devices are currently in use.

Mr. Maxwell provided additional clarification regarding the MACT process. He explained that emission limits can be developed for sources for which the MACT floor is determined to be no

control and the EPA can decide to require control more stringent than the floor. Additionally, it is within the scope of the ICCR to consider area as well as major sources.

4.6 Presentation to Coordinating Committee

Lee Gilmer requested that the Process Heater Work Group make a presentation at the July meeting of the Coordinating Committee on gas-fired process heaters and boilers. The presentation will be similar to the presentations given to the Process Heater, Boiler and Combustion Turbine Work Groups. Handouts for this presentation are available on the TTN (The file is called "gaspres.pdf" and is located in the meeting minutes sections of the Process Heater, Boiler or Gas Turbine Work Group bulletin boards.) In response to questions from the Work Group, Mr. Gilmer provided that the presentation was well received by the Boiler Work Group while the Combustion Turbine Work Group was generally unsure of how they are affected by the data presented. Mr. Gilmer stated that additional data showing relationships between HAP and criteria pollutant emissions have been added to the presentation. The Work Group supported making the presentation at the Coordinating Committee meeting.

Mr. Gilmer also informed the Work Group that API is developing a "white paper" that will provide additional test data to support the presentation. The white paper may be available in time for the July Coordinating Committee meeting. Mr. Gilmer stated that a draft of the paper will be available the first week of July and will be sent to Work Group members for review.

4.7 Computer Issues

Bill Maxwell informed the Work Group that EPA has selected Word Perfect 6.1 as their standard word processing program. Mr. Maxwell indicated that documents will be posted on the TTN in

Word Perfect 6.1. Mr. Maxwell added that EPA is considering posting documents to the TTN in Adobe Acrobat and explained that documents in Acrobat will be read-only. Lee Gilmer added that the documents are read-only if the Adobe Acrobat Reader is used to view the document; if the complete Adobe software is used, the document can be manipulated. The majority of Work Group members indicated that they are able to work with Word Perfect 6.1 files. Mr. Maxwell stated that he will continue to send electronic files to Work Group members in both Word and Word Perfect.

4.8 Need For Professional Facilitation

Bill Maxwell asked the Work Group if they believe a professional facilitator is needed to assist in conducting meetings. Mr. Maxwell added that while the Process Heater Work Group has been able to conduct meetings without a facilitator, he is concerned that as the group increases in size and issues become more contentious, a facilitator may be needed. Bruno Ferraro expressed a concern regarding the additional cost involved. John Ogle suggested that a facilitator may help keep discussion focussed and allow the group to be more productive. Mr. Ogle suggested meeting with a facilitator present and then deciding if one should be used at all or some of the meetings. Lee Gilmer expressed the concern that, unlike the other Work Groups, the Process Heater Work Group has not had a facilitator from the beginning and a facilitator would need to be brought up to speed on issues and activities of the Work Group. Bruno Ferraro suggested that, if the Work Group determines that a facilitator is needed, Mary Lalley, who has been attending the meetings in order to record them, could serve as a facilitator. Someone else could attend meetings to take notes. The Work Group agreed with this suggestion.

4.9 Relationship Between Work Groups and Coordinating Committee

Several Work Group members stated that they are concerned or unclear regarding the role of the Coordinating Committee. Lee Gilmer stated that he understood that Work Groups were to provide recommendations, which could consist of a majority and minority opinion, to the Coordinating Committee who would then provide the recommendations to EPA. Mr. Gilmer stated that he has the impression that members of the Coordinating Committee believe that they may accept or reject recommendations from the Work Groups. Mr. Gilmer suggested that if this is the case, and the Work Groups are not empowered to make recommendations to EPA, it may not be worth the time and effort of Work Group members to participate. Bruno Ferraro added that he believes it is acceptable for the Coordinating Committee to provide guidance but unacceptable for the Coordinating Committee to reject a recommendation. John Ogle agreed that the committee should be a coordinating committee not a ruling body, but pointed out that many Work Groups are asking for Coordinating Committee approval.

Mr. Gilmer also expressed a concern regarding the amount of time the Coordinating Committee requires to develop guidance for the Work Groups. Jim Seebold added that the Coordinating Committee does not provide endorsement in a timely manner and appear to spend the an excessive amount of time discussing less important issues.

Bill Maxwell explained that the Coordinating Committee is supposed to make consensus recommendations to EPA that are coordinated between the Work Groups. Mr. Maxwell added that there are procedures for the Coordinating Committee to follow in the event that consensus can not be reached. Mr. Maxwell stated that he would inform Fred Porter of the Work Group’s concerns.

5.0 ACTION ITEMS

- Work Group members will complete preliminary review of the process heater section of version 2.0 of the ICCR inventory database by the July 24 meeting.

- Bill Maxwell will find out when the other ICCR source work groups will complete preliminary review of their sections of the database.

- ERG will sort process heaters in the database by fuel type and post to the TTN.

- Bill Maxwell will revise the process flow diagram depicting the Process Heater Work Group's proposed approach and post it to the TTN.

6.0 NEXT MEETINGS

- A conference call is scheduled for July 11 at 1:00 eastern time. Topics of discussion include API's white paper on gas combustion, the July 24 meeting agenda, and the status report.

- A meeting is scheduled for July 24 in Long Beach ,CA following the Coordinating Committee meeting.

- Additional meetings are scheduled for September 18 in Durham, NC and November 20 in Houston, TX.

These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the June 19, 1997, meeting of the Process Heater Work Group. Bill Maxwell, EPA.

Attachment 1

MEETING ATTENDEES

Meeting Attendees

David Ailor, National Oilseed Processors Association
Roy Carwile, Aluminum Company of America
Chuck Feerick, Exxon Company, USA
Bruno Ferraro, Grove Scientific Company
Susan Fry, National Food Processors Association
Lee Gilmer, Texaco, Inc.
Mary Lalley, Eastern Research Group
Bill Maxwell, EPA, Office of Air Quality Planning and Standards
Diane McConkey, EPA, Office of General Counsel
Tom O'Connor, National Grain and Feed Association
John Ogle, Dow Chemical Company
Lawrence Otwell, Georgia-Pacific Corporation (by phone)
Janet Peargin, Chevron Corporation (by phone)
Robert Reeves, Institute of Shortenings and Edible Oils
Jim Seebold, Chevron Research and Technology Company
Dave Smith, Central Soya Company, Inc.

Attachment 2

MEETING AGENDA

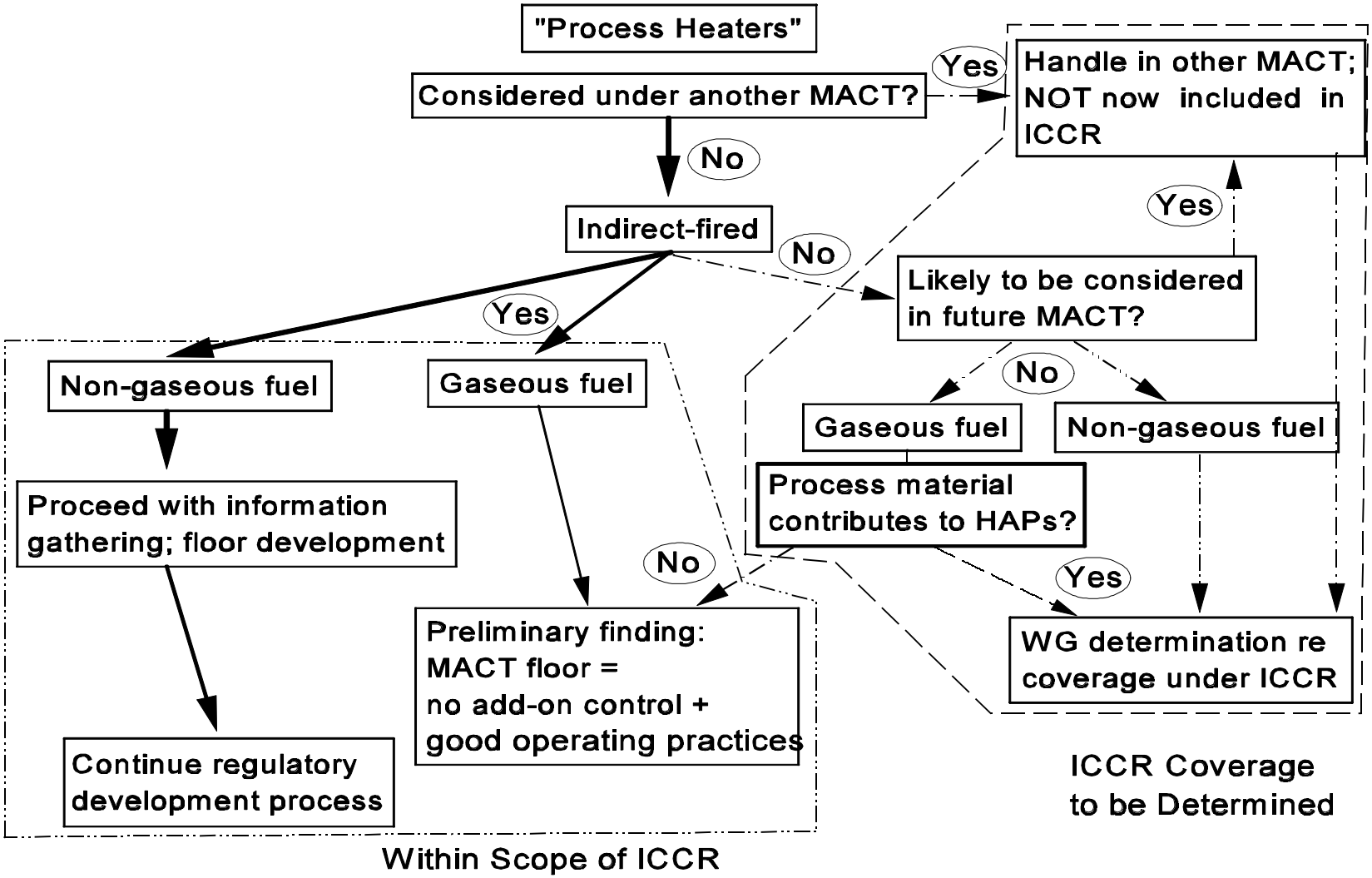
Process Heaters Source Work Group Meeting
Thursday, June 19, 1997
8:30 a.m. - 3:30 p.m.
Room 907, American Petroleum Institute
1220 L Street, NW, Washington, D.C.
Call-in number 703-736-7274 (ask for API call moderated by Lee Gilmer or Bill Maxwell)

When	What	Who	Outcome
8:30 - 8:45	Open	Bill Maxwell	
8:45 - 10:15	Discussion of inventory database changes	All	Work group members go through evaluations of database performed by individuals on their subsections following guidance given by CC
10:15 - 10:30	Break		
10:30 - 11:30	Continuation of database discussion	All	
11:30 - 12:30	Lunch		
12:30 - 1:30	Non-gaseous process heaters and other industries' process heaters	All	Work group discuss how to best acquire information on non-gaseous fueled process heaters and process heaters in industries not represented on WG
1:30 - 2:30	July CC meeting--do we have anything?	Lee Gilmer	Work group discuss any items for presentation to CC at July meeting (e.g., PERF)
2:30 - 3:00	Computer stuff	Bill Maxwell	Work group provide input on software they can and can not use for feed back to EPA and TTN
3:00 - 3:15	Discussion of need for professional facilitation	Bill Maxwell	

3:15 - 3:30	Agenda for Next Meeting; Next Steps	Bill Maxwell	Work group discuss potential items for next WG meeting, dates of next meeting(s), etc.
3:30	Adjourn		

Attachment 3

Flow Diagram For Process Heater Work Group Approach


"Process Heaters"
Considered under another MACT?
Yes
Handle in other MACT; NOT now included in ICCR
No
Indirect-fired
No
Likely to be considered in future MACT?
Yes
Yes
Non-gaseous fuel
Gaseous fuel
No
Gaseous fuel
Non-gaseous fuel
Proceed with information gathering; floor development
Process material contributes to HAPs?
No
Yes
Preliminary finding: MACT floor = no add-on control + good operating practices
WG determination re coverage under ICCR
Continue regulatory development process
ICCR Coverage to be Determined
Within Scope of ICCR

June 30, 1997